202206UECM3463OE1a

Start again

Review of preview

Started on	Sunday, 3 July 2022, 04:42 PM
Completed on	Sunday, 3 July 2022, 04:42 PM
Time taken	5 secs
Grade	**0** out of a maximum of 10 (**0**%)

1

Marks: 1

A random variable has a mean of 11 and coefficient of variation of 13. The third raw moment is 1380. Determine the skewness. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: -0.230752
Marks for this submission: 0/1.

2

Marks: 1

Claim severity has the following distribution:

Claim Size	300.0	315.0	330.0	345.0	360.0
Probability	0.48	0.19	0.17	0.15	0.01

Determine the distribution's Skewness. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 0.696316
Marks for this submission: 0/1.

3

Marks: 1

Losses have a Weibull distribution with parameters τ and θ. The 40^{th} percentile is 73,000 and 60^{th} percentile is 107,000. Determine the value of τ. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 1.528275
Marks for this submission: 0/1.

4

Marks: 1

An insurance loss is being modeled as a continuous two-spliced distribution as follows:
$f_X(x)$
$= c_1 e^{-x/200}$, $0 < x < 200$
$= c_2 e^{-x/3200}$, $x \geq 200$
Calculate the average loss. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 3074.382863
Marks for this submission: 0/1.

5
Marks: 1

For insurance coverage, you are given that claim size, X, follows a gamma distribution with parameters α = 3, θ = 860. Determine V(X∧ 1,820). _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 147586.92
Marks for this submission: 0/1.

6
Marks: 1

You are given the following:

- Losses follow a Weibull distribution with parameters θ = 30 and τ = 3.
- The insurance coverage has an ordinary deductible of 11.

If the insurer makes a payment, what is the probability that an insurer's payment is less than or equal to 31. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 0.932438
Marks for this submission: 0/1.

7
Marks: 1

A loss, *X*, follows a Pareto distribution with α = 4 and unspecified parameter θ. You are given:

$$E[X - 918|X > 918] = 2E[X-104|X > 104].$$

Calculate E[X - 2,420|X > 2,420]. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 1043.333333
Marks for this submission: 0/1.

8
Marks: 1

You are given:

- The coverage limit is 10,100.
- The expected value of the loss before considering the coverage limit is 9,540.
- The probability of a claim for 10,100 or more is 0.14.
- The mean excess loss at 10,100 is 21,190.

Determine the average claim paid less than 10,100. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 5999.302326
Marks for this submission: 0/1.

9
Marks: 1

Suppose X ~ N(μ = 90, σ^2 = 324), calculate $E[(X -54)_+]$. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 36.15
Marks for this submission: 0/1.

10
Marks: 1

The distribution of X is gamma(α = 2, θ = 1/0.1). Calculate $E(X-6)_+$. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 14.269103
Marks for this submission: 0/1.